

Claims

1. A handheld device for use with an electronic labelling system for communicating with at least one label used in the electronic labelling system,
5 said handheld device comprising transmission means (56) for transmitting a command to at least one shelf label (11) in the electronic labelling system memory means (58), control means (55) to control the function of the handheld device, and at least one button (53, 53') for providing user input,
characterized in that it comprises a receiver (59) controllable by the control means
10 (55) and arranged to receive information from a central unit (1) in the electronic labelling system.
2. A handheld device according to claim 1, wherein the transmission means (56) is arranged to transmit an authorization code to the label (11) in order to verify the au-
15 thorization to transmit said command, and the receiver (59) is arranged to receive information about a new authorization code to replace an old authorization code, and that the control means (55) is arranged to store the new authorization code in the memory means (58).
- 20 3. A handheld device according to claim 1 or 2 comprising unique identity information stored in the memory means (58) and transmission means (59) for communicating said unique identity information to the system.
4. A handheld device according to any one of the preceding claims, arranged for
25 wireless communication such as IR communication or RF communication.
5. A handheld device according to any one of the preceding claims, **characterized** in that it comprises essentially the same type of control circuit and/or receiver as the electronic labels used in the electronic labelling system.

6. A handheld device according to any one of the preceding claims, arranged to transmit to the label a command to display a certain piece of information comprised in a register in the label.

5 7. A handheld device according to any one of the preceding claims, arranged to transmit to the label a command to change information comprised in a register in the label.

10 8. A handheld device including a display (57) for displaying information to a holder of the handheld display.

15 9. An electronic shelf label system comprising at least a first base station (4) communicating with a central unit (1), and with a number of electronic shelf labels (11) through wireless connections for determining at least a first piece of information to be displayed on the labels (11), said system also comprising handheld devices for communicating with the shelf labels (11), said electronic shelf label system comprising a central unit (1) and communication means (4, 5) connected to the central unit (1), **characterized** in that the communication means (4,5) is arranged to transmit a message to at least one handheld device.

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10. An electronic shelf label system according to claim 9, **characterized** in that it is arranged to receive in the central unit (1) information transmitted from said at least one handheld device and process said information in the central unit (1).

25 11. An electronic shelf label system according to claim 9 or 10, wherein the central unit (1) is arranged to transmit a new authorization code to the handheld device, which code can be stored in the handheld device and transmitted from the handheld devices to at least one shelf label (11) for authentication of the handheld device.

12. An electronic shelf label system according to any one of the claims 9 to 11,
wherein the communication means (4, 5) are arranged to receive from the at least
one handheld device information regarding a unique identity of the handheld device
and communicate this information to the central unit (1), to enable selection of in-
5 formation to communicate to the handheld device in dependence of said unique
identity.

13. An electronic shelf label system according to any one of the claims 10-12,
wherein the handheld device and the electronic shelf labelling system are arranged
10 for wireless communication such as IR communication or RF communication.

14. An electronic shelf label system according to any one of the claims 10-13,
wherein the handheld device comprises essentially the same type of control circuit
and/or receiver as the shelf labels used in the electronic labelling system.

15. An electronic shelf label system according to any one of the claims 10-14, com-
prising a master authorization code that can be enabled in the system to give access
to all information comprised on the electronic shelf labels.

16. An electronic shelf label (11) comprising a plurality of registers (37) for holding
a plurality of different pieces of information, and a control unit (33) controlling the
display of information from the registers (37) in dependence of commands input
from a handheld device, said electronic shelf label being **characterized** in that the
label comprises at least one stored authorization code associated with each register
25 (37) and that the control unit (33) is arranged to, when a command to display the in-
formation of a specific register is received in the control unit (33), to compare a re-
ceived authorization code with a command to the stored authorization code associ-
ated with the specific register (37) and display the information contained in the reg-
ister if the received authorization code matches the stored authorization code.

17. An electronic shelf label according to claim 16 further comprising a stored master authorization code, wherein the control unit (33) is arranged to display the information contained in the register (37) if the received authorization code matches the stored master authorization code.

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18. A method for use in an electronic shelf label system, said system comprising a central unit (1) and communication means (4, 5) for communication with at least one electronic label (11) in the system, and at least one handheld device arranged to communicate with said label (11), characterized by the steps of

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- transmitting from the central unit a first message to the at least one handheld device;
 - receiving said first message in the handheld device.

19. A method according to claim 18, characterized by the steps of:

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- transmitting from the central unit to at least said first handheld device information about a new authorization code to be used by the handheld device when communicating with at least one electronic shelf label,
 - storing said new authorization code in a memory means in the handheld device for inclusion in commands transmitted to said at least one electronic label (11),
 - 20 - transmitting from the central unit (1) to at least one electronic shelf label (11) used in said electronic shelf label system information regarding the new authorization code
 - storing said new authorization code in a memory means (58) in the electronic shelf label for comparison with an authorization code comprised in a command
 - 25 received from a handheld device.

20. A method according to claim 18 or 19, wherein the handheld device and the electronic shelf label system communicate by wireless communication such as IR or RF communication

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21. A method according to any one of the claims 18 to 20, wherein the handheld device and the at least one electronic shelf label comprise essentially the same type of control unit and/or receiver.